

REMARKS

This is in response to the Office Action mailed June 19, 2003, in which claims 1-19 were rejected. With this Amendment, claims 1, 10, 14, 15 and 19 have been amended. All pending claims are presented for reconsideration and allowance.

In Section 4 of the Office Action, the Examiner rejected claims 1, 3, 4, 9 and 14-15 under 35 U.S.C. §102(b) as being anticipated by Lairson et al. (U.S. Patent No. 5,822,153). Applicant respectfully disagrees with the Examiner's assessment of the cited reference.

In particular, claim 1 describes the main pole as having a main pole tip and the return pole as having a return pole tip. Additionally, claim 1 provides that "an area of a disc-facing surface of the main pole tip is less than an area of a disc-facing surface of the return pole tip". Such main and return poles are not disclosed by Lairson et al.

Additionally, the read element cited by the Examiner in FIG. 1 of Lairson et al. is not located "upstream of the perpendicular writing element relative to the rotating disc", as described in claim 1. Instead, the read element of Lairson et al. that includes read sensor 33 is positioned downstream of write element 30 relative to the rotation of the disc, which is indicated by arrow 41.

Accordingly, Applicant submits that claim 1 is allowable and requests that the rejection be withdrawn. Additionally, Applicant submits that claims 3, 4 and 9 are allowable as being dependent from allowable base claim 1, and requests that the rejections be withdrawn.

Claim 14 has been amended to describe a head for recording perpendicularly oriented magnetic patterns to a rotating disc.

The head includes main and return poles that are separated by a write gap and a writing edge means that is located at a leading edge of the write gap. The writing edge means defines transitions between adjoining magnetic patterns that are recorded to the disc. Such a head provides improved areal density recording capability as compared to prior art perpendicular recording heads due to a higher write field gradient at the writing edge as described in the present application at page 8, lines 13-25 and page 12, lines 17-26.

Applicant submits that the head of claim 14 is neither taught nor disclosed by the prior art including Lairson et al. In particular, Lairson et al. provide no disclosure that either of the magnetically permeable layers 42 or 44 operate as return or main poles. More importantly, Lairson et al. fail to disclose the writing edge means of claim 14.

Accordingly, Applicant submits that claim 14 is allowable, and requests that the rejection be withdrawn. Additionally, Applicant submits that claim 15 is allowable as being dependent from allowable base claim 14, and requests that the rejection be withdrawn.

In Section 5 of the Office Action, the Examiner rejected claims 10, 13 and 19 under 35 U.S.C. §102(a) as being anticipated by Applicant's Admitted Prior Art (AAPA), cited as FIG. 2 and pages 5-10 of the present application. The Examiner found FIG. 2 of the cited AAPA to show a perpendicular writing element 134 that includes a main pole 144 and a return pole 140 that is located downstream of the main pole 144 relative to the rotating disc 102. Applicant respectfully disagrees with the Examiner's assessment of the cited AAPA.

In particular, arrow 172 of FIG. 2 represents the direction head 130 travels relative to the rotating disc 102 and, thus, arrow 172 points in the opposite direction of rotation of the

disc 102. Accordingly, the upstream direction relative to the disc 102 is the same direction indicated by arrow 172. As a result, return pole 140 is located upstream of main pole 144 relative to disc 102. Furthermore, read element 138 is located upstream of the writing element 134 of head 130.

Therefore, FIG. 2 of the present application does not disclose the head of claim 10. In particular, the cited AAPA does not show a perpendicular writing element including a main pole . . . a return pole . . . located downstream of the main pole relative to the rotating disc" or "a perpendicular reading element downstream of the perpendicular writing element relative to the rotating disc", as described in independent claim 10. Accordingly, Applicant submits that claim 10 is allowable in view of the cited AAPA, and requests that the rejection be withdrawn. Additionally, Applicant submits that claim 13 is allowable as being dependent from allowable base claim 10, and requests that the rejection be withdrawn.

With regard to claim 19, Applicant has described the writing element 134 of FIG. 2 on page 8, lines 13-25 as including a main pole 144 that includes a trailing edge 174 that "operates as a 'writing edge' that defines the transitions between bits of data recorded in recording layer 160, since the field generated at that edge is the last to define the magnetization orientation in the pattern 162." Accordingly, the cited AAPA does not provide a "writing edge means 'for defining transitions between adjoining magnetic patterns recorded to the disc at the leading edge of the write gap", as described in independent claim 14.

Accordingly, Applicant submits that the cited AAPA fails to disclose the head of independent claim 14. Moreover, the cited AAPA fails to disclose "a perpendicular reading element downstream of the return pole", as described in claim 19.

Therefore, Applicant submits that claim 19 is allowable and requests that the rejection be withdrawn.

In Section 8 of the Office Action, the Examiner rejected claims 2, 5-8, 11, 12 and 16-18 under 35 U.S.C. §103(a) as being unpatentable over Lairson et al. or the cited AAPA.

As discussed above, Applicant believes that independent claims 1, 10 and 14 are presently in condition for allowance even in view of the cited prior art. Accordingly, Applicant submits that claims 2 and 5-8 are allowable since they depend from allowable base claim 1, and requests that the rejections be withdrawn. Likewise, Applicant submits that claims 11 and 12 are allowable as being dependent from allowable base claim 10, and requests that the rejections be withdrawn. Finally, Applicant submits that claims 16-18 are allowable since they depend from allowable base claim 14, and requests that the rejections be withdrawn.

In view of the above, Applicant submits that the application is in condition for allowance. Reconsideration and favorable action is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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